

From: Osann, Ed [<mailto:eosann@nrdc.org>]
Sent: Monday, April 17, 2017 4:57 PM
To: DWR Water Use Efficiency
Cc: Thompson, Todd@DWR
Subject: Comments on Water Loss Regulations
Importance: High

Please accept these comments for the record of DWR's proposed regulations for Water Loss Audits and Water Loss Control Reporting.

Attached is NRDC's comment letter. In addition, the following points are comments for the record, in response to issues raised at today's hearing:

1. NRDC supports the recommendation that major substantive revisions of the AWWA water audit software should trigger revisions in the regulations, but that minor improvements to version 5.0 should not.
2. NRDC opposes any allowance for fiscal year filers to file audit reports by a later date.
3. NRDC supports the recommendation that as an accommodation to Fiscal Year filers, a report filed for a calendar year may include immediately prior fiscal year data for the financial entries to the audit report.
4. NRDC supports the recommendation that the regulations should prescribe in more detail the specific elements of a filed report, to include an operational audit report and a reporting cover sheet with specified additional information and signature(s).
5. NRDC supports the addition of specified titles of municipal officers that may attest to the audit report, but we caution that allowance for any such officers must be limited to those that have comparable managerial and supervisory responsibility for utility operations as those officers enumerated in SB 555. This responsibility cannot be delegated to subordinate staff, nor should it be elevated to those with such high-level management responsibilities that their familiarity with utility operations is necessarily limited.
6. NRDC supports the recommendation to revise 700.3(b)(5) to remove items (B), (D), and (E), provided that the language of (E) is directed toward disclosure of recommendations of the validator that were not incorporated into the final audit report as submitted. This requirement may be included in the elements of the validation process as laid out in 700.3, or alternatively be listed as a required element in a Water Audit Cover Page, if that recommendation is accepted.

Thank you for your attention to these views.

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April 17, 2017

Todd Thompson, P.E.
Water Use Efficiency
Department of Water Resources
P.O. Box 942836
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Re: Comments on Proposed Regulations – Water Audits and Water Loss Control Reporting

Dear Mr. Thompson:

Thank you for the opportunity to present these views in response to the draft regulations to implement SB 555. The preparation, validation, and filing of standardized annual water loss audit reports provide an essential foundation for the design of cost-effective loss reduction strategies and the development of fair and achievable water loss reduction targets. We support the adoption of the proposed rules with few changes (noted below), and the maintenance of the October 1, 2017 filing deadline for the initial submission of validated water audits. Although the Department has missed the statutory deadline for the completion of this rulemaking by several months, urban water suppliers have known the essential contours of this program since the enactment of SB 555 more than 18 months ago. The Cal-Nevada Section of the AWWA has done a commendable job in reaching out to water suppliers throughout the state with information and training. We would strongly object to any suggestion that the October 1 deadline be postponed.

Attachment A contains our specific recommendations for revisions to the text of the proposed regulations regarding: a) the definition of apparent losses; b) two items to be included in a minimum Level 1 validation; and c) calendar year reporting. Thank you for your attention to these views.

Respectfully submitted,

A handwritten signature in black ink that reads "Edward R. Osann".

Edward R. Osann

Senior Policy Analyst

Attachment A
NRDC Recommended Revisions to Proposed Regulations:
Water Audits and Water Loss Control Reporting

Section 700.1. Definitions

(a) Apparent Losses

Although drawn directly from the text of the AWWA M-36 Manual, the definition of apparent losses is less clear than it should be, with the term “losses in customer consumption” leading to potential confusion. A better extraction from M-36 would be as follows –

“Apparent losses” means nonphysical (paper) losses that result in uncaptured revenue for the water utility attributed to inaccuracies associated with customer metering, systematic data handling errors, or unauthorized consumption.

Section 700.3. Standardized Conduct for Validation of Water Loss Audits.

The enumerated list of items for review and evaluation in (b)(2) should be expanded to include:

(F) Derivations of customer meter accuracy.

(G) Derivations of number of active and inactive service connections.

In the *Level 1 Water Audit Validation: Guidance Manual* (WRF 4639A), customer meter accuracy is the top item listed where additional supporting documentation will improve the level 1 validation process (see p. 75). It cannot be overemphasized that the AWWA water audit method is an inferential process – real losses *cannot* be measured, but only inferred from what *can* be measured. Thus, it is critical to understand the degree of accuracy of both production meters *and* customer service meters, which together comprise the beginning and end points of the public water delivery system.

It is understood that treatment of this issue in a Level 1 validation does *not* involve a critique of customer meter testing, but rather the effective characterization of customer meter accuracy determinations in the data quality matrix. A data quality score of 8 for Customer Meter Inaccuracy is properly claimed by systems with ongoing customer meter replacement and accuracy testing of appropriate samples to determine optimal replacement schedules. A data quality score of 4, on the other hand, is indicated where the inaccuracy volume is largely an estimate. In the unvalidated audits submitted with Urban Water Management Plans in 2016, fully 40% of all retail water suppliers claimed a data quality score of 8 or higher for customer meter inaccuracy, while only 20% reported a score of 4 or lower. It is important for the validator to review the derivation of this important entry to assure that the proper data quality grade is recognized in the final audit.

Additionally, we recommend that the number of service connections be reviewed during validation. Key performance indicators of real and apparent loss volumes are normalized for benchmarking across all utilities by dividing these volumes by the number of service connections. Distortions in the number of service connections will lead to significant distortions in the calculation and comparison of “real losses per service connection per day” and “apparent losses per service connection per day.” SB 555 requires the State Board to set performance standards for the *volume* of water losses. The M-36 approach calls for normalizing loss volumes by using the number of active and inactive service connections – hence the importance of accurately characterizing the validity of this data entry as part of Level 1 validation in California.

Section 700.5. Audit Reporting Requirements.

SB 555 allows the Department to specify whether water loss audits should be based upon a calendar year or a fiscal year. As currently proposed, section 700.5(a) would allow for either time period to be used. We recommend that the final regulation specify that all reporting is to be made on a calendar year basis, the format already used by the great majority of water suppliers. Over 70% of the audit reports submitted by retail agencies with their Urban Water Management Plans in 2016 used a January to December reporting period.

Data availability should not be a serious issue, as most key data entries are initially compiled daily or monthly and aggregated to a 12-month period for reporting. Apart from adding to consistency, it should also be noted that calendar year reporting may reduce the impact of discrepancies associated with opening and closing the reporting year. Year-end closing presents specific challenges for reconciling water production data with customer sales data, the latter being generated by meter reading processes that lag production by up to 60 days in a system with bi-monthly billing. The effect of these discrepancies, and their inconsistent treatment from one year to the next, is magnified when the reporting period ends in the middle of the summer period of peak water demand, when each day’s water use may be 150 or 200% of the levels during winter months. Calendar year closing can reduce the impact of these issues on reported loss volumes.

Recognizing that previous drafts of the regulations allowed for fiscal year reporting, and in light of the delay in completing this rulemaking pushing ever closer to the October 1, 2017 date for initial filing of validated audits, we recommend that the requirement for calendar year filing be phased to take effect October 1, 2018.